

CLAIMS

The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention
5 what is claimed is:

1. A latch assembly control method, comprising the steps of:

integrating a latch assembly with a motor having at least one gear
10 thereof for actuating a plurality of components of said latch assembly; and

associating a geartooth sensor with said latch assembly, wherein said geartooth sensor senses a position of said at least one gear, wherein said at least one gear completes less than one revolution to thereby provide a
15 known reference point registration and calibration of said latch assembly via data collected from said geartooth sensor.

2. The method of claim 1 further comprising the step of configuring said geartooth sensor to comprises at least one magnet located proximate to said
20 at least one gear of said motor.

3. The method of claim 1 wherein said latch assembly comprises a vehicle door latch assembly.

25 4. The method of claim 1 further comprising the step of integrating said geartooth sensor with said latch assembly.

5. The method of claim 1 further comprising the step of providing a vehicle management module which communicates with said door latch
30 assembly for control of said vehicle door latch assembly, including said motor and said at least one gear thereof.

6. The method of claim 5 further comprising the step of communicating data from said geartooth sensor, wherein said is data indicative of a known reference point associated with said at least one gear for calibration thereof.

5 7. The method of claim 1 further comprising the step of calibrating via said vehicle management module at least one component of said door latch assembly based on data collected from said geartooth sensor.

8. The method of claim 1 further comprising the step of providing a
10 plurality of geartooth sensors for collecting position data associated with said at least one gear.

9. The method of claim 5 further comprising the step of actuating at least one component of said door latch assembly utilizing said vehicle
15 management module based on data collected from said plurality of geartooth sensor.

10. The method of claim 5 further comprising the step of actuating at least one component of said door latch assembly utilizing said vehicle
20 management module based on data collected from said at least one geartooth sensor.

11. A latch assembly control system, comprising:

25 a latch assembly integrated with a motor having at least one gear thereof for actuating a plurality of components of said latch assembly; and

a geartooth sensor associated with said latch assembly, wherein said geartooth sensor senses a position of said at least one gear, wherein said at
30 least one gear completes less than one revolution to thereby provide a known reference point registration and calibration of said latch assembly via data collected from said geartooth sensor.

12. The system of claim 11 wherein said geartooth sensor comprises at least one magnet located proximate to said at least one gear of said motor.

5 13. The system of claim 11 wherein said latch assembly comprises a vehicle door latch assembly.

14. The system of claim 11 wherein said geartooth sensor is integrated with said latch assembly.

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15. The system of claim 11 further comprising a vehicle management module which communicates with said door latch assembly for control of said vehicle door latch assembly, including said motor and said at least one gear thereof.

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16. The system of claim 15 wherein said geartooth sensor communicates data indicative of a known reference point associated with said at least one gear for calibration thereof.

20 17. The system of claim 15 wherein said vehicle management module calibrates at least one component of said door latch assembly based on data collected from said geartooth sensor.

25 18. The system of claim 11 further comprising a plurality of geartooth sensors for collecting position data associated with said at least one gear.

19. The system of claim 15 wherein said vehicle management module actuates at least one component of said door latch assembly based on data collected from said plurality of geartooth sensor.

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21. A latch assembly control system, comprising:

a latch assembly integrated with a motor having at least one gear thereof for actuating a plurality of components of said latch assembly; and

5 a geartooth sensor associated with said latch assembly, wherein said geartooth sensor senses a position of said at least one gear, wherein said at least one gear completes less than one revolution to thereby provide a known reference point registration and calibration of said latch assembly via data collected from said geartooth sensor; and

10 a vehicle management module which communicates with said door latch assembly for control of said vehicle door latch assembly, including said motor and said at least one gear thereof, wherein said vehicle management module actuates at least one component of said door latch assembly based on data collected from said at least one geartooth sensor.